

REMARKS

Claims 11 and 19-32 are pending in the application, and are rejected. The previously indicated allowability of claim 11 and dependencies is withdrawn in view of the newly discovered U.S. Application No. 11/916498 and Nakamura.

Claim 11 is herein amended to remove possible constituents therein, claims 20-22 are amended to correspond with claim 11, and claims 23-25 are herein canceled. No new matter has been presented.

Double Patenting

Claims 11 and 19-32 rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over copending Application Serial No. 11/91 6498. The Examiner asserts that although the conflicting claims are not identical, they are not patentably distinct from each other because the copending application claims a process obviating the claimed process.

Applicant elects to defer addressing such issue until such times as the claims are otherwise in condition for allowance.

Claim Rejections - 35 U.S.C. §103(a)

Claims 11, 19-26 and 29-32 are rejected under 35 U.S.C. §103(a) as being unpatentable over Fujimura (US 4,859,255) in view of Kim (US 7,163,591) and further in view of Nakamura

“Magnetic Properties of Miniature Nd-Fe-B Sintered Magnets’ (from the IDS filed November 30, 2007).

The Examiner asserts that Fujimura teaches permanent magnets of the (Fe,Co)-B-R family (wherein the amount of Co can be 0) (Abstract). These magnets are made by the basic steps as set forth in column 8, lines 25-50, with an additional optional aging step which can be performed at from 350 to the sintering temperature, wherein the sintering temperature is defined as anything between 900 and 1200 °C (See Column 8, Lines 5- 20).

The Examiner admits that Fujimura does not use a heat treatment where a powder of a fluoride of R is disposed on the sintered magnet form. The Examiner concludes that it would have been obvious based on the teachings of Kim to include a heat treatment step including any of the disclosed additives with the sintered form, after the initial sintering of the composition.

The Examiner admits that Fujimura in view of Kim are silent as to the use of a slurry to dispose the powder on the magnetic form. The Examiner notes however that Nakamura teaches that fine powders such as those taught by Kim can be disposed on the sintered magnetic form by a dip coating process, wherein either an oxide or fluoride of dysprosium is dispersed.

Claim 27 is rejected under 35 U.S.C. §103(a) as being unpatentable over Fujimura in view of Kim and Nakamura as applied to claim 11 above, and further in view of Mitsuji (US 5,286,366).

The Examiner admits that the applied art does not teach using an acid, alkali, or organic solvent to clean the magnet form.

Claims 27-28 is rejected under 35 U.S.C. §103(a) as being unpatentable over Fujimura in view of Kim and further in view of Nakamura as applied to claim 11 above, and further in view of Hamada (US 6,777,097).

Claim 11 includes the step of

“disposing a powder comprising one or more members selected from an oxide of R², a fluoride of R³, and an oxyfluoride of R⁴ wherein R², R³ and R⁴ each are one or more elements selected from among rare earth elements inclusive of Y and Sc on a sintered magnet form of a R¹-Fe-B composition wherein R¹ is one or more elements selected from among rare earth elements inclusive of Y and Sc, said sintered magnet form having a dimension of at least 0.5 mm in a magnetic anisotropy direction”.

Importantly, prior to present amendment, the above step includes the group of “oxide of R², a fluoride of R³, and an oxyfluoride of R⁴”.

Previously, Applicant had amended claim 1 to recite that the above group only included an “oxide of R²”, and did not include a fluoride or oxyfluoride. However, when claim 11, which was previously indicated as allowable, was rewritten in independent form it again included the fluoride and oxyfluoride.

With respect to the oxide of Kim et al., Applicant notes in the description therein of Fig. 4, the text on column 5, lines 18-25 indicate that, “Therefore, an additive is used to restore the coercivity to be close to the magnetic characteristics of the sintered magnet. As in FIG. 4, the coercivity of the thermally treated powders including various additives is shown. In cases of using R-fluoride (DyF₃, NdF₃, PrF₃) as the additive, the coercivity has a greater increase, compared to cases without the additive. **However, oxides and chlorides have a negative influence on the coercivity.**” (Emphasis added.)

Applicant submits that the above passage would have led one skilled in the art away from oxides, because such oxides impart negative influence on coercivity. Because there is reason not to use the oxide of Kim et al., amendment of claim 11 to preclude the fluoride and oxyfluoride should overcome the rejection.

Following amendment of claim 11, claims 20-22 are amended to correspond with claim 11, and claims 23-25 are canceled.

In view of the aforementioned amendments and accompanying remarks, Applicant submits that the claims, as herein amended, are in condition for allowance. Applicant requests such action at an early date.

If the Examiner believes that this application is not now in condition for allowance, the Examiner is requested to contact the undersigned attorney to arrange for an interview to expedite the disposition of this case.

Application No. 10/572,753
Attorney Docket No. 062281

Response under 37 C.F.R. §1.111
Response filed February 3, 2011

If this paper is not timely, Applicant petitions for an appropriate extension of time. Any fees that may be due with respect to this paper may be charged to Deposit Account No. 50-2866.

Respectfully submitted,

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